

REMARKS

Claims 1-15 were pending. In view of the foregoing amendments, and arguments that follow, Applicants request withdrawal of all rejections upon reconsideration.

Claims 1-10 and 12-15 were finally rejected in an Office Action dated as mailed March 29, 2006. Applicants appealed the rejection to the Board. The Board affirmed the Examiner's rejection in a decision dated May 27, 2008. Applicants appealed the Board's decision to the Court of Appeals for the Federal Circuit. The court vacated the Board's decision and remanded to the Board for further proceeding in view of several factual errors made by the Board in reaching its decision to affirm the Examiner. On remand, the Board not only affirmed the Examiner's rejection of one or more claims, but also designated the rejections as new grounds of rejection under 35 U.S.C. §103(a). As a result, Applicants could choose to request a rehearing of the decision, or reopen prosecution and submit an amendment or new evidence, or both, to have the matter reconsidered by the Examiner. Applicants choose the latter course.

Rejections Under 35 U.S.C. § 103(a)

Claims 1-10, 12, 13, and 15 stood rejected as allegedly obvious over Gonzalez et al. (6,025,158). This rejection was maintained in the Decision.

The Board relied principally on the discussions in Gonzalez et al. regarding attaching derivatized PEG to the hinge region of Fab'-SH fragments (rFF7); regarding using a polymer molecule to link two antibody fragments together to form a dumbbell-shaped structure (rFF8); and regarding linking to the Fab'-SH fragment through its cysteine-SH group (rFF4) (Decision, pp. 8-9). While admitting that Gonzalez et al.

describes six different antibody fragments that could be used to form the dumbbell-shaped structure, the Board stated that six is a limited number of fragments from which to choose (Decision, p. 8) and asserted that one of ordinary skill would have been led to select Fab'-SH based upon its recognized advantage in the prior art (rFF2) and its use in a working example (rFF7) (Decision, p. 9). Applicants maintain that the Board, like the Examiner, is using hindsight to arrive at Applicants invention and is disregarding contrary disclosure in Gonzalez et al.

Regardless, to advance prosecution, Applicants have amended claim 1 to recite that the polymer itself is not the non-disulphide bridge but, rather, is covalently attached to the non-disulphide bridge. Support for this amendment can be found, *inter alia*, on p. 15, ll. 30-32, of the application as filed, which indicates that two Fab' fragments are cross-linked with a pegylated **dimaleimide** bridge. Thus, a single dimaleimide molecule, to which the PEG is attached, links the two antibody fragments. Gonzalez et al. does not disclose or suggest an antibody fragment as presently claimed. As the Board noted, Gonzalez et al. reports that the **polymer** is used to link together two antibody fragments of the dumbbell-shaped structure, i.e., the polymer is the bridge (Decision, rFF8, p. 5).

Applicants request that this rejection be withdrawn.

Claims 1 and 13-14 stood rejected as allegedly unpatentable over Gonzalez et al in view of Barbanti et al (5,436,154). The Board maintained this rejection in its decision, asserting that it was unnecessary to reconsider the decision because the Board did not rely upon findings identified by the Federal Circuit as factually incorrect. Although Applicants contend that the Board did rely upon its incorrect factual findings regarding

Gonzalez et al. to affirm this rejection, in view of the amendment to claim 1 discussed above, Applicants submit that this rejection has been overcome. Barbanti et al. does not overcome the deficiency of Gonzalez et al, i.e., Barbanti et al. does not disclose or suggest using another molecule as the non-disulphide bridge, to which the polymer is then attached.

Applicants respectfully request that this rejection be withdrawn.

CONCLUSION

Applicants respectfully submit that the above-identified application is now in condition for allowance and request early notification of the same.

Respectfully submitted,

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